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USWEST

Robert H. Jackson
Executive Director-
Federal Regulatory

Ex Parte

April 27, 1995

William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222, SC-1170
Washington, D.C. 20554

RECEIVED

APR 27 1995

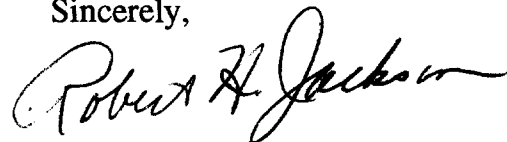
Re: CC Docket No. 92-237

Dear Mr. Caton:

Today Margaret Bumgarner, Christine Butler, Jeff Owens and the undersigned representing U S WEST Communications and U S WEST Multimedia met with James Schlichting, Phillip Cheilik, Carol Matthey and Matthew Harthun of the Common Carrier Bureau to discuss the above-referenced proceeding. We discussed issues related to local number portability. The attached materials were left with the Commission Staff. Please include a copy of this letter in the record in this proceeding.

Acknowledgment and date of receipt of this letter are requested. A duplicate letter is attached for this purpose.

Sincerely,



Attachments

cc: James Schlichting
Phillip Cheilik
Carol Matthey
Matthew Harthun

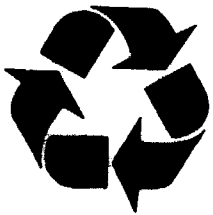
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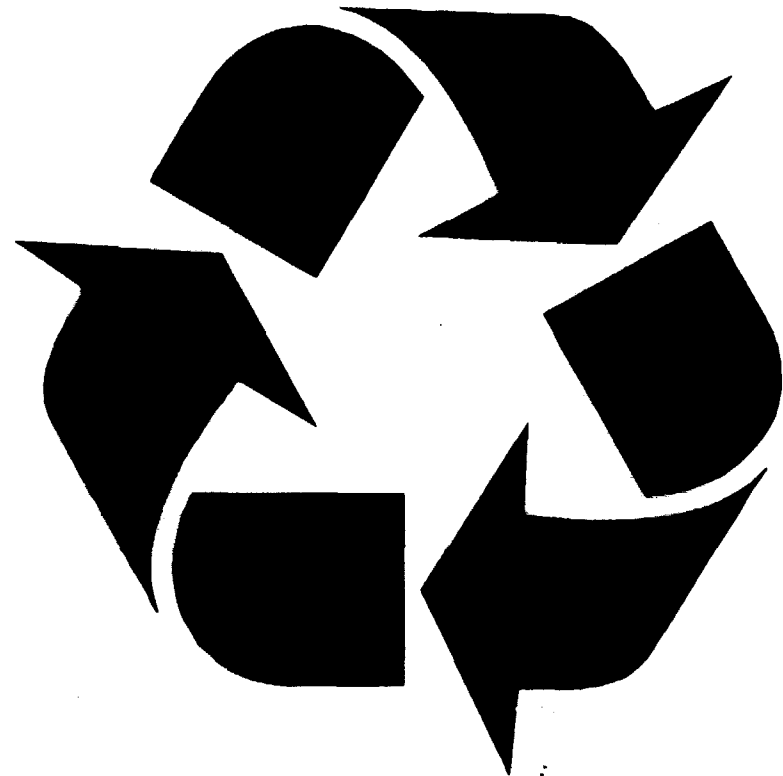
Number Portability

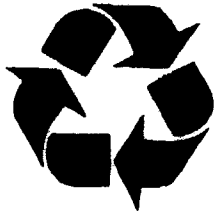
FCC Ex Parte Presentation
CC Docket 92-237



Purpose

- Review interim and long term number portability issues
- Review U S WEST's participation in the Seattle Database Trial
- Discuss issues that should be addressed by the FCC in the Further Notice

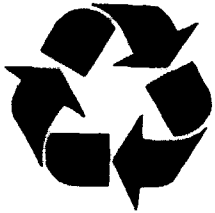




Background

U S WEST Competitive Activities

- Several states in the U S WEST region are actively pursuing competition in the local exchange:
 - » **Washington** state has certificated five Alternative Exchange Carriers (AECs). ELI and Teleport began service in January '95. MFS and MCI Metro are expected to offer service by 4Q'95.
 - » **Iowa** has certificated one AEC -- McLeod. Interconnection 2Q'95.
 - » **Oregon** is considering the certification of MFS, MCI Metro and ELI.
 - » **Utah** is considering the certification of ELI and Phoenix Fiberlink
 - » **Minnesota** has solicited comments on local exchange competition
 - » **Arizona** has proposed rules which will govern certification of AECs. Rules are expected to be effective July 1, 1995.
- U S WEST will be an AEC outside its fourteen state region
 - » **Georgia** has adopted legislation opening competition. Rulemaking on expedited schedule. U S WEST will soon seek certification as an AEC.



Background

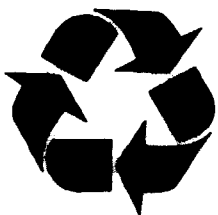
NANP Fundamentals

- North American Numbering Plan (NANP) structure facilitates addressing, routing and billing
 - » Addressing
 - Each NPA/NXX unambiguously identifies a unique central office in North America
 - » Routing
 - All network providers can route calls to the terminating central office knowing only the NPA/NXX of the called number
 - » Billing
 - Each NPA/NXX has a recognized V and H coordinate
 - Carriers can determine the distance of a call knowing only the NPA/NXX of the called and calling parties



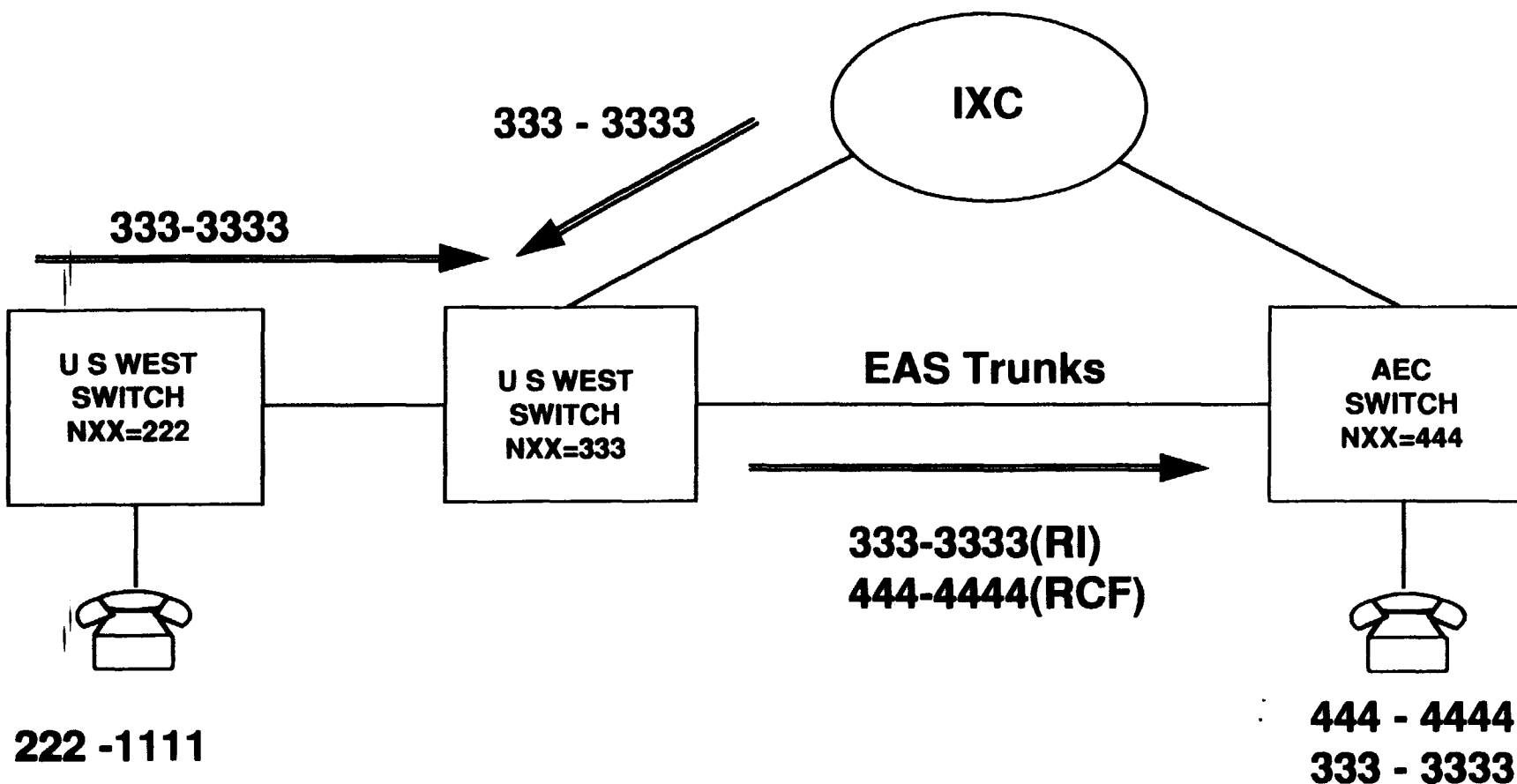
800 vs. Geographic Portability

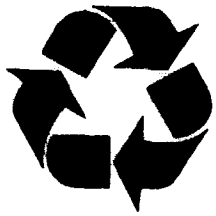
- Portability of geographic numbers is more complex than for 800 numbers
 - » Toll Calls
 - 800 traffic is exclusively toll-free.
 - Geographic portability must address new issues raised by toll traffic
 - How can a caller know if a call is toll or local?
 - If toll, is the call 100 miles? 1,000 miles? 10,000 miles?
 - » Addressing
 - 800 numbers are translated to an existing addressing plan
 - Geographic portability requires a new addressing plan
 - » Routing
 - All 800 numbers required translation at cutover
 - Geographic numbers will require a transition
 - » Call Volumes
 - 800 call volumes are less than 10% of geographic volumes



Interim Portability

Route Indexing and Remote Call Forwarding

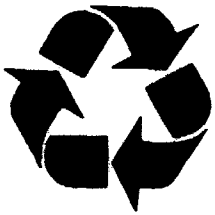




Interim Portability

●Advantages of RI and RCF

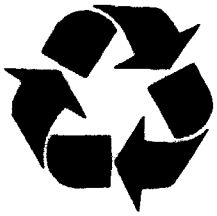
- » Uses existing technology
- » NPA/NXX still assigned to unique central offices
 - Carriers can continue to rely on NPA/NXX for
 - addressing
 - routing
 - billing



Interim Portability

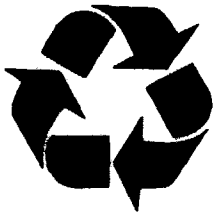
●Disadvantages of RI and RCF

- » All terminating calls route to incumbent's switch
- » Requires inefficient trunking arrangements
- » Requires translations in both the LEC and AEC switches
- » AEC cannot bypass LEC terminating access
- » Wastes number resources -- two numbers required for each portable address
 - AEC must forward new ANI to ensure IXC renders bill to AEC, not incumbent LEC
- » Certain CLASS features may be disabled



Database Portability

- Permits calls to be routed directly to a customer's network provider
- NPA/NXXs are not dedicated to individual central offices
- Thus, database number portability requires new approaches for:
 - » Addressing calls
 - How do network providers identify central offices?
 - » Routing calls
 - For a given called telephone number, how do originating and transit network providers determine the address of the terminating network provider's switch?
 - » Billing and Rating calls
 - How do network providers (and customers) determine the distance between the calling and called parties?



Database Portability

- Industry Numbering Committee's Number Portability Workshop

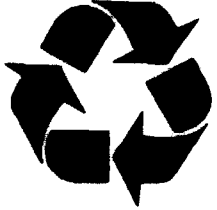
- » Is exploring technical issues surrounding a national solution

- Regional Trials

- » Seattle Database Trial (currently underway)
- » Ameritech RFP
- » New York State Trial

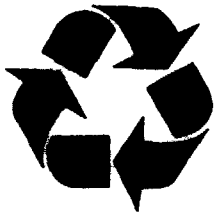
- Regional approaches must be avoided

- » Potential incompatibility
- » Potential misrouting of calls
- » Considerable confusion in industry
- » Wasted resources



Seattle Database Trial -- Overview

- Seattle Database Trial is currently in progress
- Trial participants include:
 - » U S Intelco (Trial manager)
 - » Stratus (Database Provider)
 - » Electric Lightwave (AEC)
 - » Teleport (AEC)
 - » U S WEST (LEC)
 - » GTE (LEC and SS7 Hub Provider)



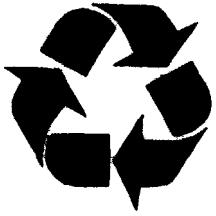
Seattle Database Trial -- Overview

- The Seattle trial is a 'proof of concept' trial
- New addressing scheme bifurcates telephone numbers:
 - » CNA -- Customer Name Address
 - The number dialed by the calling party
 - Uses ten-digit NANP format
 - Always translated to a network node address
 - » NNA -- Network Node Address
 - CNAs are translated to NNAs
 - Uses the ten-digit NANP format
 - NNAs are internal network addresses only -- are not dialed by callers



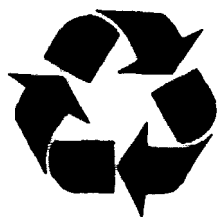
Seattle Trial Schedule

- Phase 0 (complete)
- Phase I (In progress)
- Phase III (3Q'95)
- Phase IV (4Q'95)
- Test Calls, One AEC
- Test Calls, Multiple AECs, LECs
- Performance Tests
- CLASS, Vertical Services, Support Systems

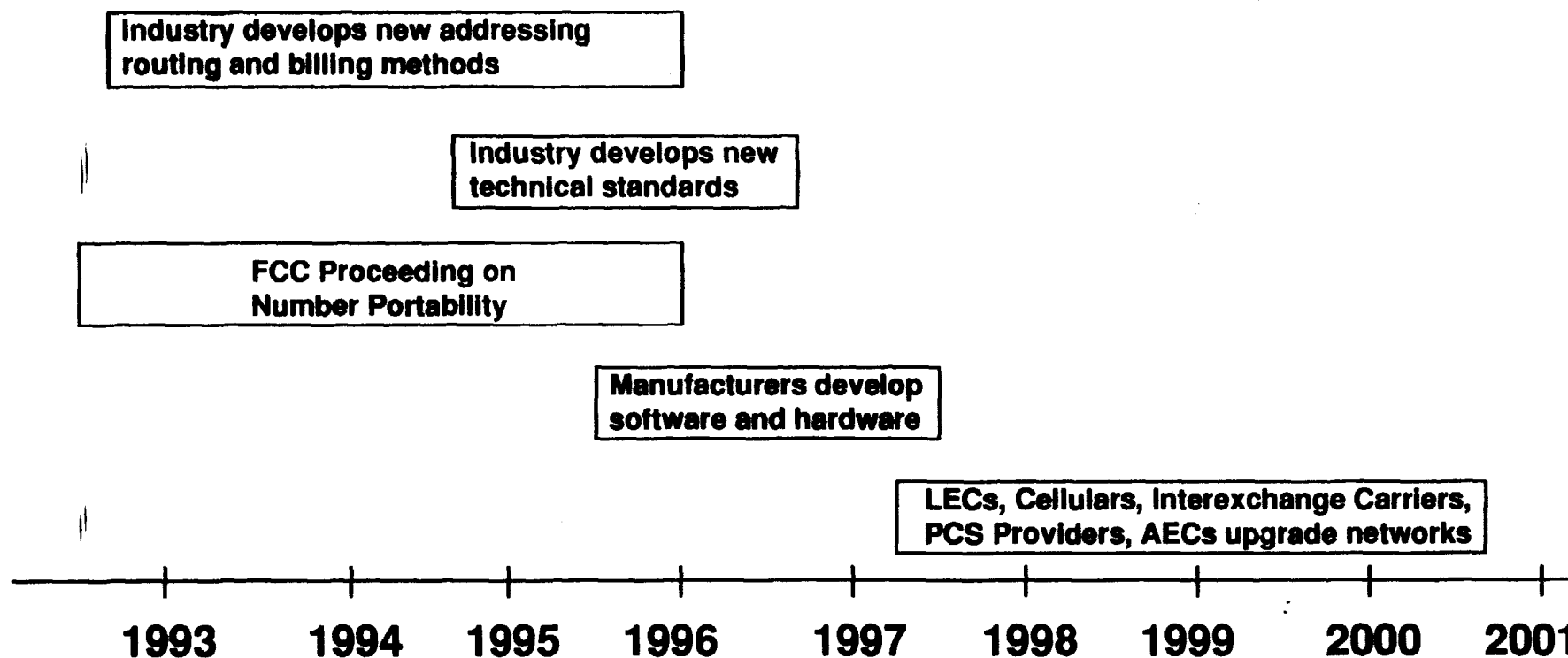


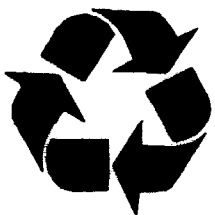
Seattle Database Trial -- U S WEST Objectives

- Identify technical, operational and administrative issues caused by the disruption of the current NPA/NXX system
 - » Operational support systems and other system impacts
 - Service order and provisioning
 - Repair bureau
 - Directory Assistance
 - Business office
 - E-911
 - Operator Services
 - Billing Systems
 - Network management
 - » Call routing -- potential ambiguities
 - » Impacts on CLASS and related services
 - » SS7 network and SCP capacities
 - » Call Set-up times
 - » Billing



Potential National Database Deployment Schedule





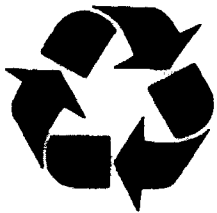
Further Notice -- Issues for FCC

●Range of Number Portability

- » Local calling area?
- » NPA?
- » State?
- || » National?
- » International?

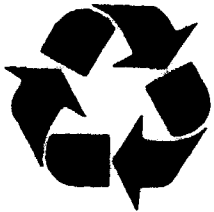
●What are the interests of:

- » Business customers
- » Residence customers
- || » Called Parties
- » Calling Parties
- » State Regulators



Further Notice -- Issues for FCC

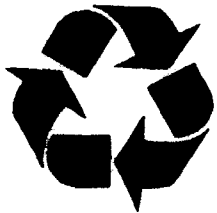
- If portability is confined to local calling area,
 - » How are local calling areas defined?
 - AEC?
 - LEC?
 - PCS?
 - Cellular?
- If portability is not confined to local calling area,
 - » How will callers know if call is local or toll?
 - » Who pays? Calling party or called party?
 - » Requires substantial changes to billing systems
 - New billing systems to determine V and H coordinates of calling and called party via database queries



Further Notice -- Issues for FCC

● Evaluation of cost and benefits

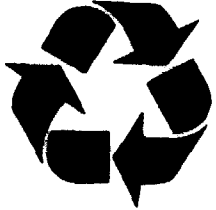
- » What are the costs of various portability architectures?
- » What are the associated benefits of each architecture?
- » Do benefits outweigh costs?
 - What are the incremental benefits of database vs. interim forms of portability?
 - What proportion of customers will want number portability?
 - When? 1996? 1998? 2000?
 - For how long? Until next directory is published?
 - Can database portability postpone the exhaust of area codes?



Further Notice -- Issues for FCC

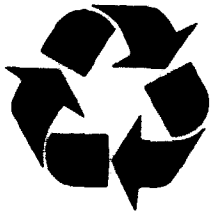
●Cost recovery issues

- » Whose customers will pay?
 - Who is cost causer?
 - What rate structure promotes economic efficiency?
- » When should architecture be deployed?
- » Transition Plan?



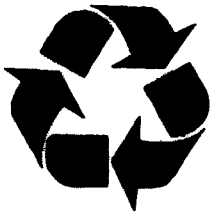
Further Notice -- Issues for FCC

- Who should be required to provide portable numbers?
 - » Tier I LECs?
 - » non-Tier I LECs?
 - » AECs?
 - » PCS?
 - » Cellular?
 - » Resellers?
 - » Other?
 - » All service providers?
 - » In markets with certificated AECs only?



Further Notice -- Issues for FCC

- Geographic portability will require a national or regional service management system (SMS)
 - » Who is the national/regional SMS administrator?
 - » Who pays the cost of the SMS administrator?
 - » Who has access to the SMS for number assignments?



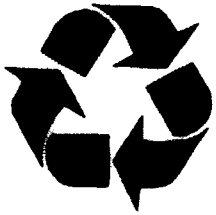
Further Notice -- Issues for Industry

- The FCC should direct the industry to address the following issues:
- Development of new ***national*** network architectures
 - » New routing plan, using database queries
 - Where is query performed?
 - Originating end office if capable?
 - Tandem switch?
 - IXC switch?
 - N-1 switch?
 - Terminating switches
 - Other?
 - » New addressing plan
 - Should network addresses retain a 10-digit NANP format?
 - Other?



Further Notice -- Issues for Industry

- The FCC should also direct the industry to address:
 - » Modification of SS7 protocols
 - Contain identification of called and calling party
 - Customer number
 - Network address
 - ANI
 - Indication of whether database query has been performed
 - Other (e.g., terminating service provider identification)
 - » New billing systems
 - Historical record of V and H coordinates for each telephone number, by time of day



Conclusion

- U S WEST supports the establishment of a further notice of inquiry to explore the issues surrounding long term number portability. The notice should investigate:
 - » The costs and benefits of various long term portability options relative to the various interim portability solutions
 - » The range of number portability
 - » Interests of various customers
 - » How will local and toll rating areas be defined
 - » Impact on toll calls if local calling areas differ among carriers
 - » Cost recovery issues
 - » Who should participate
 - » Number administration issues (SMS administrator)
 - » Issues to be directed to industry forums
 - New address plan
 - New routing plan
 - New SS7 parameters